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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/043,143 | 01/14/2002 | Gang Huang | HUANG 14-13-7 | 6844 |

7590 03/14/2005

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| EXAMINER |
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REILLY, SEAN M

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| ART UNIT | PAPER NUMBER |
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2153

DATE MAILED: 03/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-----------------|--------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/043,143 | HUANG ET AL. | |
| | Examiner | Art Unit | |
| | Sean Reilly | 2153 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is a first action on the merits of this application. Claims 1-24 are presented for further examination.

Priority

1. The effective filing date for the subject matter defined in the pending claims in this application is 1/14/2002.

37 CFR § 1.105 – Request for Information

2. Applicant and the assignee of this application are required under 37 CFR § 1.105 to provide the following information that the examiner has determined is reasonably necessary to the examination of this application. The information is required to complete the background description in the disclosure by documenting home phone line transceiver specifications.

In response to this requirement, please provide copies of the following:

- A) Home Phoneline Networking Alliance (HomePNA) Specification versions 1.0, 2.0, and 3.0

3. The fee and certification requirements of 37 C.F.R. § 1.97 are waived for those documents submitted in reply to this requirement. This waiver extends only to those documents within the scope of this requirement under 37 C.F.R. § 1.105 that are included in the applicant's first complete communication responding to this requirement. Any supplemental replies subsequent to the first communication responding to this requirement and any information disclosures

beyond the scope of this requirement under 37 C.F.R. § 1.105 are subject to the fee and certification requirements of 37 C.F.R. § 1.97.

4. The applicant is reminded that the reply to this requirement must be made with candor and good faith under 37 CFR 1.56. Where the applicant does not have or cannot readily obtain an item of required information, a statement that the item is unknown or cannot be readily obtained will be accepted as a complete response to the requirement for that item.
5. This requirement is an attachment of the enclosed Office action. A complete response to the enclosed Office action must include a complete response to this requirement. The time period for reply to this requirement coincides with the time period for reply to the enclosed Office action, which is 3 months.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Specifically the specification fails to disclose 1) how a calibration value is determined and 2) how such a value is used to optimize the transfer of data between two nodes. Stating that the processor analyzes noise, propagation delay, and bit rate error values to produce a calibration value (for example see pg 5 lines 12-17

or pg 8 lines 18-22) fails to enable one of ordinary skill in the art how to *determine* a calibration value.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 4, 6, 12, 14, 20, and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
8. Claims 4, 6, 12, 14, 20, and 22 each recite the limitation “an optimal calibration value” which renders the claim indefinite. The specification fails to specify any criteria for rendering a calibration value *optimal*, nor was such criteria well known in the art at the time of invention.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1, 3-4, 6, 9, 11-12, 14, 17, 19-20, and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Schober et al. (U.S. Patent Number 6,493,320; hereinafter Schober).
10. Regarding claims 1 and 9, Schober discloses a self calibrating network comprising: a first node (for example Figure 1, Routers 105a or 105b between link 110a) transmitting a calibration

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data packet (any packet sent while tuning; e.g. a test pattern); and a second node (for example Figure 1, Routers 105a or 105b) receiving said calibration data packet and determining (Figure 7, Component 600) a calibration value (frequency, power level) for said second node to optimize the transfer of data from said first node to said second node (reliable transfer at the fastest possible speed and lowest possible power level, Col 2 lines 32-42).

11. Regarding claim 3, Schober discloses said calibration data packet contains a node identification (chip id and port number) associated with said first node (transferred during master slave configuration for tuning, Col 7, lines 50-55).

12. Regarding claim 4, Schober discloses said second node repeatedly accepts copies of said calibration data packet from said first node until the transfer of data from said first node to said second node is optimized (multiple packets transmitted for each component to be tuned during tuning algorithm 600, for instance Link Exercise 714, Col 16, lines 16-37).

13. Regarding claim 6, Schober discloses said first node repeatedly transmits a calibration data packet until said second node acknowledges an optimal calibration value has been determined (multiple packets transmitted for each component to be tuned during tuning algorithm 600, for instance Link Exercise 714, Col 16, lines 16-37).

14. Regarding claims 9, 11-12, 14, 17, 19-20, and 22, the limitations of claim groups 9, 11-12, 14, and 17, 19-20, 22 are similarly drawn to the limitations of claims 1, 3-4, and 6, respectfully. Thus, a similar rationale is used for rejecting the claims with the exemplarily tuning system of figure 2a or 2b providing the *means for* executing the functionality mapped in claims 1-6.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 2, 5, 10, 13, 18, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schober et al. (U.S. Patent Number 6,493,320; hereinafter Schober) and the knowledge of one of ordinary skill in the art at the time of invention.

16. Regarding claims 2, 5, 10, 13, 18, and 21, Schober discloses said second node stores said calibration value in a memory, each link connected to a router has its own tuning system, e.g. tuning system 200b of router 105b for link 110a, which stores the optimized configuration for transferring data on that *link* after the tuning algorithm of figure 7 has successfully completed. While Schober discloses storing the calibration value in memory Schober fails to disclose storing the calibration value in a specific *calibration* memory however, the Examiner takes official notice that it was well known in the art at the time of the invention to centrally store data in memory with a corresponding identification. It would have been obvious to one of ordinary skill in the art at the time of the invention to store the calibration values for each tuning system within a router at a single memory location with an associated node identification (such as a chip id and port number, Col 7, lines 50-55), in order to have a central location for maintaining all calibration values used within a given router.

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17. Claims 7-8, 15-16, and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schober et al. (U.S. Patent Number 6,493,320; hereinafter Schober) and Stewart (U.S. Patent Number 5,563,915).

18. Regarding claims 7-8, 15-16, and 23-24, Schober fails to disclose issuing a network lock command on the network, ceasing nodes other than said first node or said second node from communicating on the network and a unlock command on the network, giving permission to all nodes on the network to again begin communication. In a related art, Stewart discloses silencing nodes connected together for communication on a bus (analogous to a network) through a tri-state signal in order to reduce noise (Col 4, lines 46-54). It would have been obvious to one of ordinary skill in the art at the time of invention to modify Schober's system to implement a similar tri-state signal for silencing devices on the network, as disclosed by Stewart, in order to reduce line noise (Col 4, lines 46-47).

Conclusion

19. The prior art made of record, in PTO-892 form, and not relied upon is considered pertinent to applicant's disclosure.

20. This office action is made **NON-FINAL**.


21. This Office action has an attached requirement for information under 37 C.F.R. § 1.105. A complete response to the enclosed Office action must include a complete response to this requirement. The time period for reply to this requirement coincides with the time period for reply to the enclosed Office action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean Reilly whose telephone number is 571-272-4228. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glen Burgess can be reached on 571-272-3949. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


2/16/2005


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